

WHAT IS CLAIMED IS:

- 1        1.      A method for minimizing the cycle time of a burnish cycle, comprising:
  - 2            performing an initial MR resistance measurement for a head;
  - 3            determining whether the measured MR resistance indicates the head has clearance; and
  - 5            completing the test cycle when the head is determined to have clearance.
- 1        2.      The method of claim 1 further comprising:
  - 2            initiating operation to reduce fly-height of the head;
  - 3            continue burnishing the surface;
  - 4            performing another MR resistance measurement; and
  - 5            returning to determine whether the measured MR resistance indicates the head has clearance.
- 1        3.      The method of claim 2, wherein the initiating operation to reduce fly-height of the head further comprises selecting at least one process from the group comprising reducing the pressure within the disclosure, reducing the spindle speed and increasing the pre-load to the head.
- 1        4.      The method of claim 1, wherein the determining whether measured MR resistance indicates the head has clearance further comprises comparing the absolute MR resistance measurements to a threshold to identify whether the head has clearance.

1           5.       The method of claim 1, wherein the determining whether measured MR  
2 resistance indicates the head has clearance further comprises comparing the MR  
3 resistance rate of change to a threshold to identify whether the head has clearance.

1           6.       A drive controller for minimizing the cycle time of a burnish cycle, the  
2 drive controller comprising:  
3           memory for storing data therein; and  
4           a processor, coupled to the memory, the processor being configured for  
5 performing an initial MR resistance measurement for a head, determining whether the  
6 measured MR resistance indicates the head has clearance and completing the test cycle  
7 when the head is determined to have clearance.

1           7.       The method of claim 6, wherein the processor is further configured for  
2 initiating operation to reduce fly-height of the head, continue burnishing the surface,  
3 performing another MR resistance measurement and returning to determine whether the  
4 measured MR resistance indicates the head has clearance.

1           8.       The method of claim 7, wherein the processor initiates operation to  
2 reduce fly-height of the head by selecting at least one process from the group  
3 comprising reducing the pressure within the disclosure, reducing the spindle speed and  
4 increasing the pre-load to the head.

1           9.       The method of claim 6, wherein the processor determines whether  
2 measured MR resistance indicates the head has clearance by comparing the absolute MR  
3 resistance measurements to a threshold to identify whether the head has clearance.

1           10.      The method of claim 6, wherein the processor determines whether  
2 measured MR resistance indicates the head has clearance by comparing the MR  
3 resistance rate of change to a threshold to identify whether the head has clearance.

1           11.      A program storage device readable by a computer, the program storage  
2 device tangibly embodying one or more programs of instructions executable by the  
3 computer to perform operations for minimizing the cycle time of a burnish cycle, the  
4 operations comprising:

5           performing an initial MR resistance measurement for a head;  
6           determine whether the measured MR resistance indicates the head has clearance;  
7           and  
8           completing the test cycle when the head is determined to have clearance.

1           12.      The program storage device of claim 11 further comprising:  
2           initiating operation to reduce fly-height of the head;  
3           continue burnishing the surface;  
4           performing another MR resistance measurement; and  
5           returning to determine whether the measured MR resistance indicates the head  
6           has clearance.

1           13.     The program storage device of claim 12, wherein the initiating operation  
2     to reduce fly-height of the head further comprises selecting at least one process from the  
3     group comprising reducing the pressure within the disclosure, reducing the spindle  
4     speed and increasing the pre-load to the head.

1           14.     The program storage device of claim 11, wherein the determining  
2     whether measured MR resistance indicates the head has clearance further comprises  
3     comparing the absolute MR resistance measurements to a threshold to identify whether  
4     the head has clearance.

1           15.     The program storage device of claim 11, wherein the determining  
2     whether measured MR resistance indicates the head has clearance further comprises  
3     comparing the MR resistance rate of change to a threshold to identify whether the head  
4     has clearance.